

Waveguide Fiber for Dispersion and Slope Compensation**Abstract of the Invention**

Disclosed is a total dispersion and total dispersion slope compensating optical waveguide fiber. The refractive index profile of the compensating waveguide fiber includes a core region having a central segment and two surrounding annular segments. In an embodiment of the compensating waveguide fiber, a first clad layer adjacent the core region has a refractive index lower than that of a second clad layer adjacent the first clad layer. The optical waveguide fiber in accord with the invention has negative total dispersion and negative total dispersion slope over the operating window of the fiber to be compensated. The invention includes a compensated optical waveguide fiber span which includes a high performance waveguide fiber and a compensating waveguide fiber in accord with the invention.

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